



**AIRPORT: Toledo-Winlock Ed Carlson Memorial Field (TDO)**  
**ASSOCIATED CITY: Toledo**  
**ARC: B-II**  
**REGION: Southwest**

**AIRPORT DATA AND FACILITIES**

Ed Carlson Memorial Field is located in Lewis County, three miles north of Toledo. The Airport has 38 based aircraft, 36 of which are of the single-engine variety, while the remaining 2 are multi-engine piston-powered. The latest available data indicate that Ed Carlson Memorial Field had 23,625 annual operations. The Airport has one runway. Runway 5-23 is 4,960 feet long, 150 feet wide, has an asphalt surface, and is equipped with pilot controlled medium intensity runway lights. There are no published instrument approaches to the Airport.

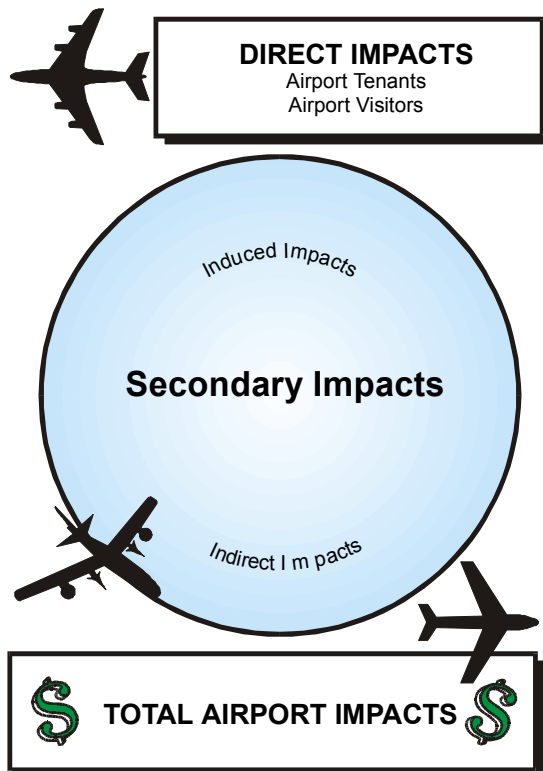


**ECONOMIC IMPACTS**

The economic impacts of Washington's airports were calculated using a methodology, which has evolved over the past decade and is nationally recognized as the standard for conducting economic impact studies of airports. The methodology is consistent with analytical models used by the Federal Aviation Administration (FAA), and employs the use of direct survey information and an input/output model (IMPLAN) as developed by the U.S. Department of Commerce to determine multipliers specific to the state of Washington for "secondary" economic impacts.

Types of Economic Impact - This study identified and examined those aviation activities at the public use airports in Washington that created economic impacts. These impacts are generated in three ways: **1)** Direct, **2)** Indirect, and **3)** Induced Effects. Combined, the three impact types yield the total economic impacts of an airport, as described below:





### **DIRECT ECONOMIC IMPACTS**

These economic impacts occur as a consequence of providing aviation services. These impacts usually occur at the airports, and comprise the financial expenditures by firms which carry passengers (air carrier, air charter or air taxi) or cargo; firms which serve the air carrier and general aviation functions (airport tenants); governmental agencies which support aviation; ground transport firms; and others. In every instance, the impacts include only expenditures where the recipient is located within each airport's service area. Aviation-related tenants on the Airport included Skydive Toledo, Inc. and Toledo Flying Club. Approximately 8,000 visitors arrived at the Airport as a result of general aviation operations. The total combined direct output of on-airport tenants and general aviation visitors was \$3,494,931. These

first-round expenditures at the airport accounted for 57 jobs with combined wages of approximately \$872,524.

### **INDIRECT ECONOMIC IMPACTS (Secondary Impact)**

These economic impacts occur as a result of the use of aviation service. They include the regional expenditures made by air passengers who visit the region (at hotels, restaurants, ski facilities, etc.); expenditures by the region's residents associated with their use of aviation; and expenditures by firms having economic activity which is dependent on the airport. These indirect impacts accounted for an output of \$704,190 and nine jobs with combined wages of \$234,102.

### **INDUCED ECONOMIC IMPACTS (Secondary Impacts)**

The "indirect" and "direct" impacts represent increases in regional final demand. Such increases do not represent total economic impact; there is also a "multiplier" effect. This multiplier effect comprises the local value of money as it circulates through the local economy and as individuals or firms associated with airport business buy goods and services in the local economy. Induced impacts accounted for an output of \$786,166 and ten jobs with combined wages of \$251,339. Each airport's total economic impact is the sum of the three types of impacts.





## TOTAL ECONOMIC IMPACTS

The total economic impacts across the state were quantified by adding together the direct, indirect and induced impacts for each airport, and interpreting, comparing, and presenting the results.




The output of the IMPLAN model enabled the presentation of total economic impacts by airport in terms of three economic impact measures: 1) jobs (employment); 2) earnings (payroll), and; 3) economic activity (output). Each of these was determined based on individual multipliers per industry categories. In each case, total impacts include the aviation sector itself, as well as the "multiplier effect" of the aviation sector. The impacts were estimated using Year 1998 data.

All three indicators of economic impact are useful; however, the monetary measures should not be added together, as discussed below:

- **Jobs (Employment)** - The number of employees who are employed in the aviation industry, plus the aviation-oriented share of those that are employed in sectors that support the air passenger (hotels, restaurants, etc.) plus those employed in the industries included in the multiplier effect impacts. The number of jobs attributable to an industry is always greater than simply those in the industry itself, due to the "re-spending" of money. Total employment impact was approximately 77 jobs.
- **Labor Earnings (Payroll)** - The sum of the wages and salaries to all employed persons that the aviation industry pays, directly or indirectly, to deliver the output of final aviation demand. Earnings Impacts are always included in the Economic Activity totals, so they should not be summed with the Economic Activity impact. Earnings are a very conservative proxy for "value added." Earnings may be greater or less than the Direct and Use values depending on the industry type. Total earnings impact was \$1,357,966.
- **Economic Activity (Sales Output)** - The value of the aviation final demand (aviation or airport service), plus the "multiplier" effect (the sum of all of the intermediate goods and services needed to produce the aviation final demand, plus the induced impacts of increased household consumption). Total economic activity equals the sum of intermediate demands, consumption demand, government demand, investment demand, and net export demand. Economic Activity is always larger than both the Direct and Use values because it includes the multiplier effect. Total economic activity impact was \$4,967,287.





	Direct Impacts	+	Indirect Impacts	+	Induced Impacts	=	Total Impacts*
<b>Jobs (Employment)</b> 	Number of Jobs Supported		Number of Jobs Supported		Number of Jobs Supported		Total Number of Jobs Supported
	57.0		9.1		10.4		76.5
<b>Labor Earnings (Payroll)</b> 	Annual Salary Supported		Annual Salary Supported		Annual Salary Supported		Total Annual Salary Supported
	\$872,524		\$234,102		\$251,339		\$1,357,966
<b>Economics (Sales Output)</b> 	Contribution to Economy (Dollars)		Contribution to Economy (Dollars)		Contribution to Economy (Dollars)		Total Contribution to Economy (Dollars)
	\$3,494,931		\$704,190		\$768,166		\$4,967,287

\* Figures may not add due to rounding.

## SUMMARY

On an annual basis, Ed Carlson Memorial Field's tenants and its visitors in Lewis County, Washington contribute the following total annual economic benefit:

<b>Jobs (Employment)</b> 	<b>Labor Earnings (Payroll)</b> 	<b>Economic Activity (Sales Output)</b> 
<b>Total 76.5</b>	<b>Total \$1,357,966</b>	<b>Total \$4,967,287</b>

